MITTEL'SHTEDT, A.A.; BAUMAN, L.K.

Content of ceruloplasmin in hepatocerebral dystrophy patients and in their healthy relatives. Zhur. nevr. i psikh. 64 no.6:819-823 '64. (MIRA 17:12)

1. Institut nevrologii (direktor - prof. N.V. Konovalov) AMN SSSR, Moskva.

KRZESKI, Tadeusz; LEWICKI, Zdzislaw; MITTELSTAEDT, Maurycy; NASIOROWSKA, Wanda

Spontaneous filtration of urine into the perirenal tissue in a case of ureteral stenosis. Polski tygod. lek. 16 no.27:1042-1046 3 Jl '61.

1. Z Lecznicy Ministerstwa Zdrowia; dyrektor: dr Wl. Kulesza.

(URETERS dis)

MITTELSTAEDT, Maurycy; WILKIN, Zofia

A case of mycosis of the lungs. Polski tygod. lek. 14 no.26:1197-1198 29 June 59.

1. (Z Oddz. Chorob Wewnetrznych Lecznicy Ministerstwa Zdrowia: Kierownik: prof. dr. M. Fejgin).
(ASPERGILLOSIS, case reports) (LUNG DISEASES, case reports)

MITTELSTAEDT, Maurycy

Medical selection of candidates for going to tropical countries. Polski tygod. lek. 13 no.43:1685-1686 27 Oct 58.

1. Z Oddzialu Wewnetrznego Lecznicy Min. Zdrowia; Kierownik: prof. dr M. Fejgin.

(MEDICINE, TROPICAL,
screening of candidates for emigration to tropical countries (Pol))
(EMIGRATION AND IMMIGRATION
same)

JANUSZEWICZ, Halina; MITTELSTAEDT, Maurycy

Ancylostomiasis in a patient with gastrointestinal anastomosis.
Polski tygod. lek. 11 no.19:844-846 7 May 56.

1. Z Leczniecy Ministerstwa Zdrewia; kier.: prof. dr.
Mieczyslaw Fejgin. Warszawa, Lecznica Ministerstwa Zdrowia.
(ANCYLOSTOMIASIS, case report
(Pol))

OVES, I.S., kand.tekhn.nauk; MITTEL'SHTEYN, M.G., inzh.; SINITSKIY, A.Z.; KHODOSH, M.S.; KOZHIN, A.P., kand.ekon.nauk, nauchnyy red.; GERASIMOVA, G.S., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Practice and effectiveness of centralized transportation of construction materials in Moscow] Opyt i effektivnost' tsentralizovannykh perevozok stroitel'nykh gruzov v Moskve. Moskva, Gosstroiizdat, 1962. 166 p. (MIRA 15:7)
(Moscow--Building materials--Transportation)

VAGIN, P.; MITTEL'SHTEYN, M.; KHODOSH, M.

Efficient delivery of materials for erecting buildings. Avt. transp. 37 no.2:10-11 F '59. (MIRA 13:1)

1. Mosstroytrans.
(Building materials--Transportation)

MAKAROVA, K.M.; MITTEL'SHTEDT, A.L.

Content of glutamine in blood serum in hepatocerebral dystrophy. Zhur.nevr. i psikh. 66 no.1:55-56 '66. (MIRA 19:1)

1. Institut nevrologii AMN SSSR, Moskva. Submitted October 28, 1964.

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; BARKHATOVA, V.P.

Activity of some enzymes of the blood serum in hepatocerebral dystrophy. Vop.med.khim. 11 no.6:30-33 N-D '65. (MIRA 18:12)

1. Institut nevrologii AMN SSSR, Moskva. Submitted June 2, 1964.

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; BARKHATOVA, V.P.

Metabolism changes in the relatives of persons suffering from hepatocerebral dystrophy. Zhur. nevr. i psikh. 65 no.1:3-12 '65. (MIRA 18:2)

1. Institut nevrologii (direktor - prof. N.V. Konovalov AMN SSSR, Moskva.

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.

Copper metabolism in hepatocerebral dystrophy. Vop.med.khim. 10 no.3:252-256 My-Je '64. (MIRA 18:2)

1. Institut nevrologii AMN SSSR, Moskva.

MITTEL'SHTEDT, A.A.; BAYMAN, L.K.; KARPINSKAYA, V.M.; KNYAZEVA, G.R.

Lipoproteins in the blood serum in different types of disorders of the cerebral circulation. Zhur. nerv. i psikh. 62 no.1:59-65 '62. (MIRA 15:4)

(LIPORROTEINS) (CEREBROVASCULAR DISEASES)

MITTEL'SHTEDT, A.A.

Clinical biochemistry. Vop. med. khim. 8 no.3:323-324 My-Je '62.
(MIRA 15:7)
(BIOCHEMISTRY)

MITTELSHTEDT, A. A., BAUMAN, L. K., and PATRUNOVA, V. P. (USSR)

"Aminoferases of Blood Serum and the Amino Acid Metabolism during Hepato-Cerebral Dystrophy."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 Aug 1961

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700001-6

MITTEL'SHTEDT, Anna Al'bertovna

[Nervous system and vitamins; the significance of certain vitamins of group B for the activity of the nervous system] Nervnaia sistema i vitaminy; o znachenii nekotorykh vitaminov gruppy B dlia deiatel'nosti nervnoi sistemy. Moskva, Medgiz, 1961. 17 p. (MIRA 14:11)
(NERVOUS SYSTEM) (VITAMINS—B)

MITTEL'SHTEDT, A.A.; MAKAROVA, K.M.

Changes in the amount of phosphorus compounds in various parts of the central nervous system in lateral amyotrophic sclerosis. Zhur. nerv.i psikh. 59 no.12:1444-1446 '59. (MIRA 13:4)

1. Institut nevrologii (dir. - prof. N.V. Konovalov) AMN SSSR, Moskva.

(SPINAL CORD--DISEASES)
(NERVOUS SYSTEM)
(PHOSPHORUS IN THE BODY)

MITTEL'SHTEDT, A.A.

"Critical review of concepts of neuro-muscular lesions in experimental vitamin E deficiency predominantly in adult rats" [in English] by L.Minerson. Reviewed by A.A.Mittel'shtedt. Zhur.nevr. i psikh. 57 no.1:148-150 '57. (MIRA 10:3)
(DEFICIENCY DISEASES) (NERVOUS SYSTEM--DISEASES)
(MUSCLES--DISEASES)

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; MAKAROVA, K.M.

Changes in the carbohydrate and phosphorus metabolism during treatment of neuroses with prolonged drug-induced sleep. Zhur. nevr. i psikh. Supplement:35 '57. (MIRA 11:1)

1. Institut nevrologii (dir. - prof. N.V.Konovalov) AMN SSSR, Moskva.
(SLEEP--THERAPEUTIC USE) (NEUROSES)
(METABOLISM, DISORDERS OF)

KROLYUNITSKAYA, T.L.; MAKAROVA, K.M.; MITTEL'SHTEDT, A.A.; KHRUSHCHEVA, Ye.A.

Vitamin B_{12} therapy of lateral amyotrophic sclerosis. Zhur.nevr. i psikh. 56 no.4:319-322 '56. (MLRA 9:7)

1. Institut nevrologii (dir.-prof. N.V.Konovalov) AMN SSSR i Institut khirurgii (dir.-prof. A.A.Vishnevskiy) AMN SSSR, Moskva
(AMYOTROPHIC LATERAL SCLEROSIS, therapy, vitamin B_{12} (Rus))
(VITAMIN B_{12}, therapeutic use, amyotrophic lateral sclerosis (Rus))

MITTEL'SHTEDT, A. A.

A. A. Mittel'shtedt, L. K. Bauman, and M. A. Borog. "Changes in carbon-dioxide and nitrogen exchange in war-time brain traumas", In the collection: Nevrologiya voyen. Vremeni, Vol. I, Moscow, 1949, p. 105-14

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949)

MITTEL'SHTELT, A. A.

"Siginificance of Vitamin E in the Development of Various Pathological Processes in the Nervous System," Nevropatol. i. Psikhiat., 17, No. 1, 1948. Inst. of Neurol. Acad. Med. Sci.USSR, -c1948-.

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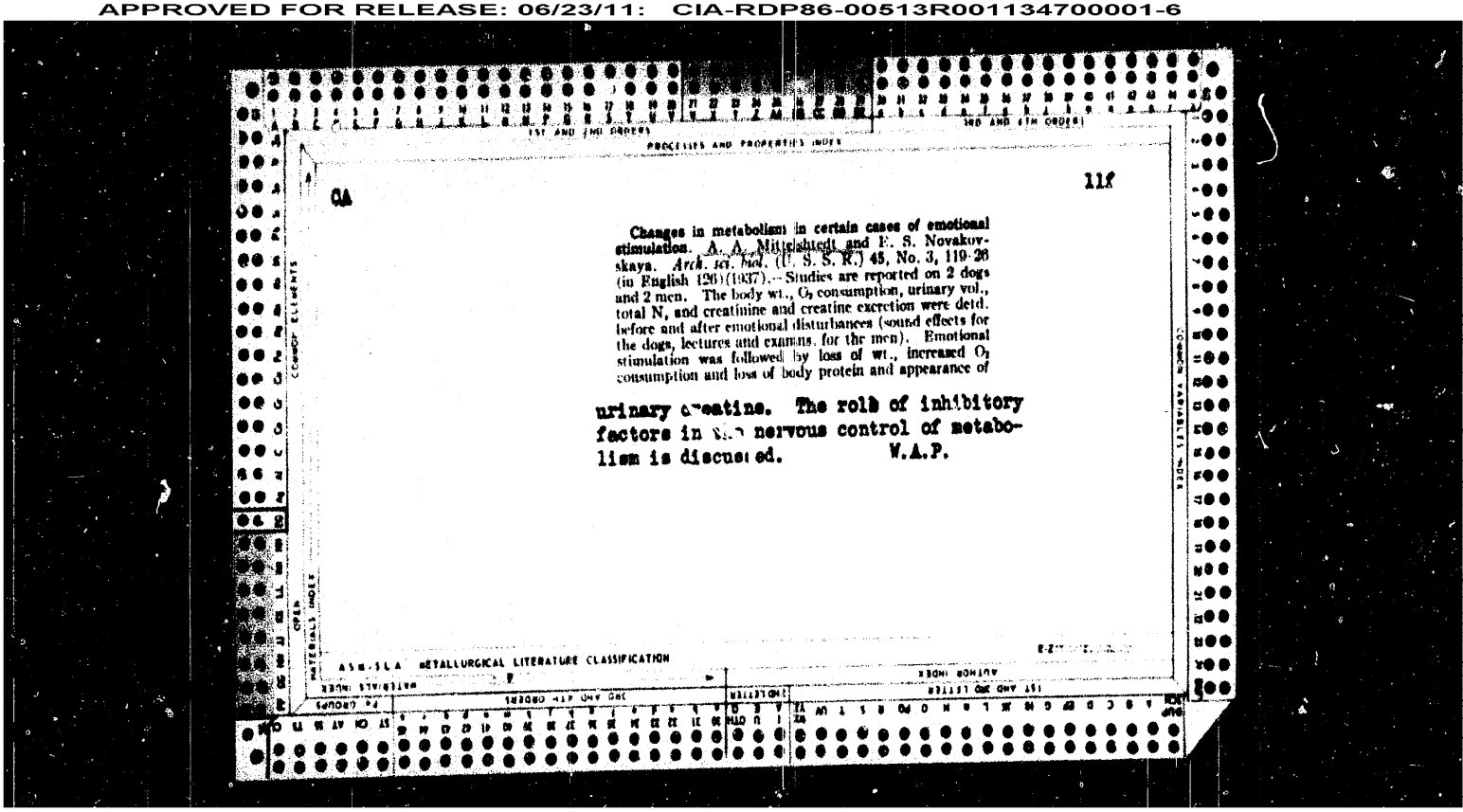


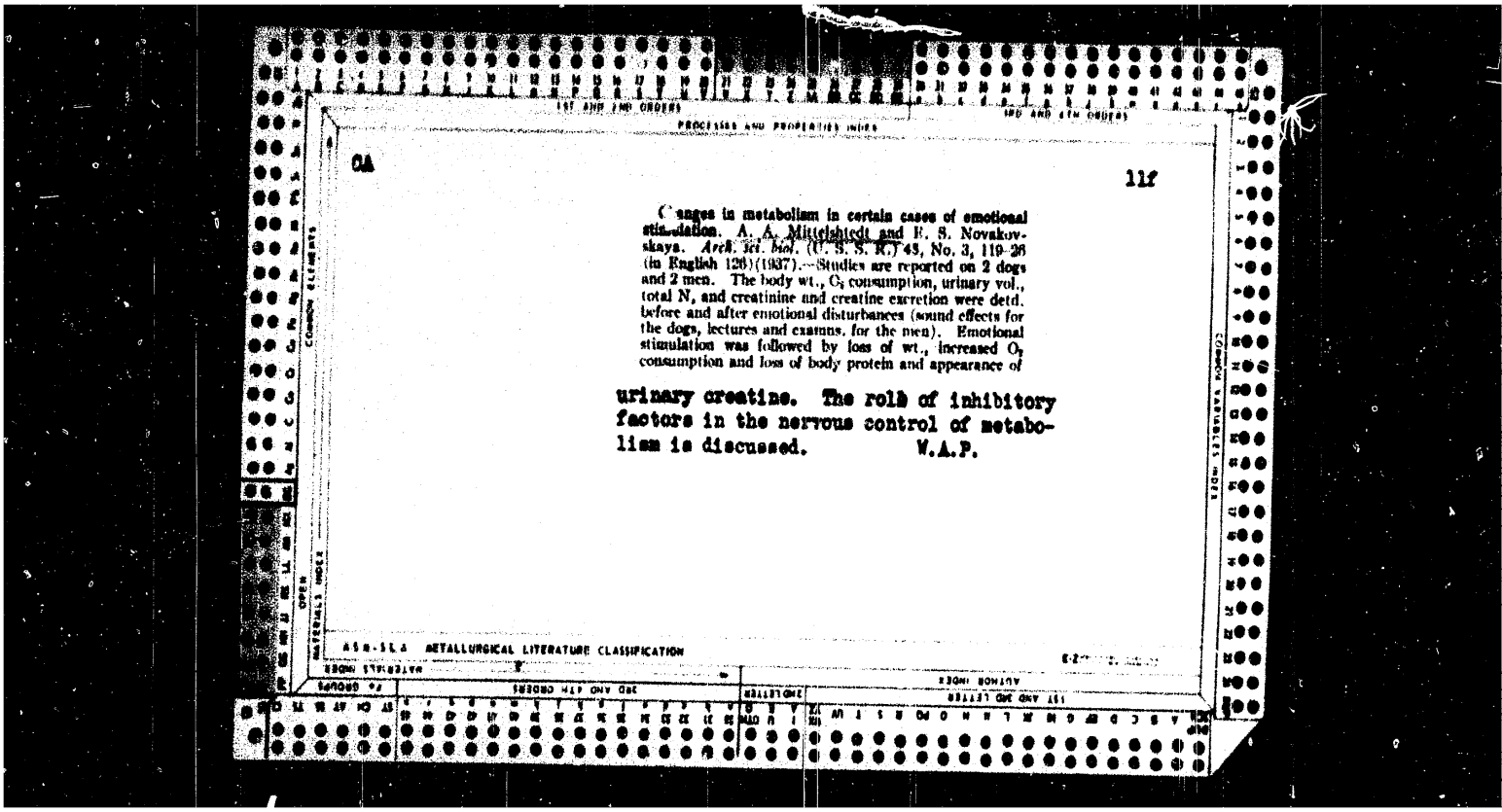
PROCESSES AND PROPERTIES INDEX

QA

11f

Changes in metabolism in certain cases of emotional stimulation. A. A. Mittelshtedt and E. S. Novakovskaya. *Arch. sci. biol.* (U. S. S. R.) 45, No. 3, 119-26 (in English 126)(1937).—Studies are reported on 2 dogs and 2 men. The body wt., O_2 consumption, urinary vol., total N, and creatinine and creatine excretion were detd. before and after emotional disturbances (sound effects for the dogs, lectures and exams. for the men). Emotional stimulation was followed by loss of wt., increased O_2 consumption and loss of body protein and appearance of urinary creatine. The role of inhibitory factors in the nervous control of metabolism is discussed. W.A.P.

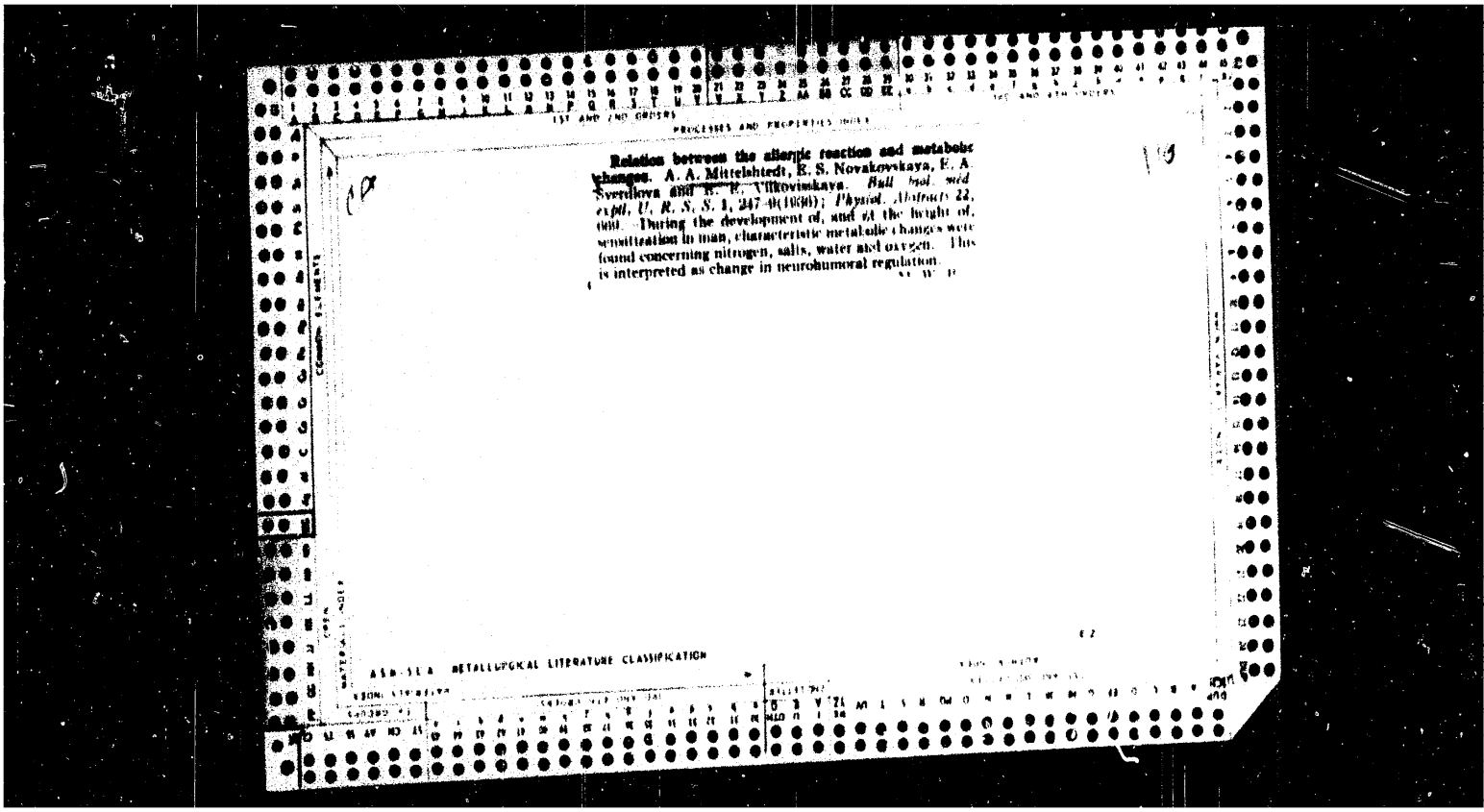
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

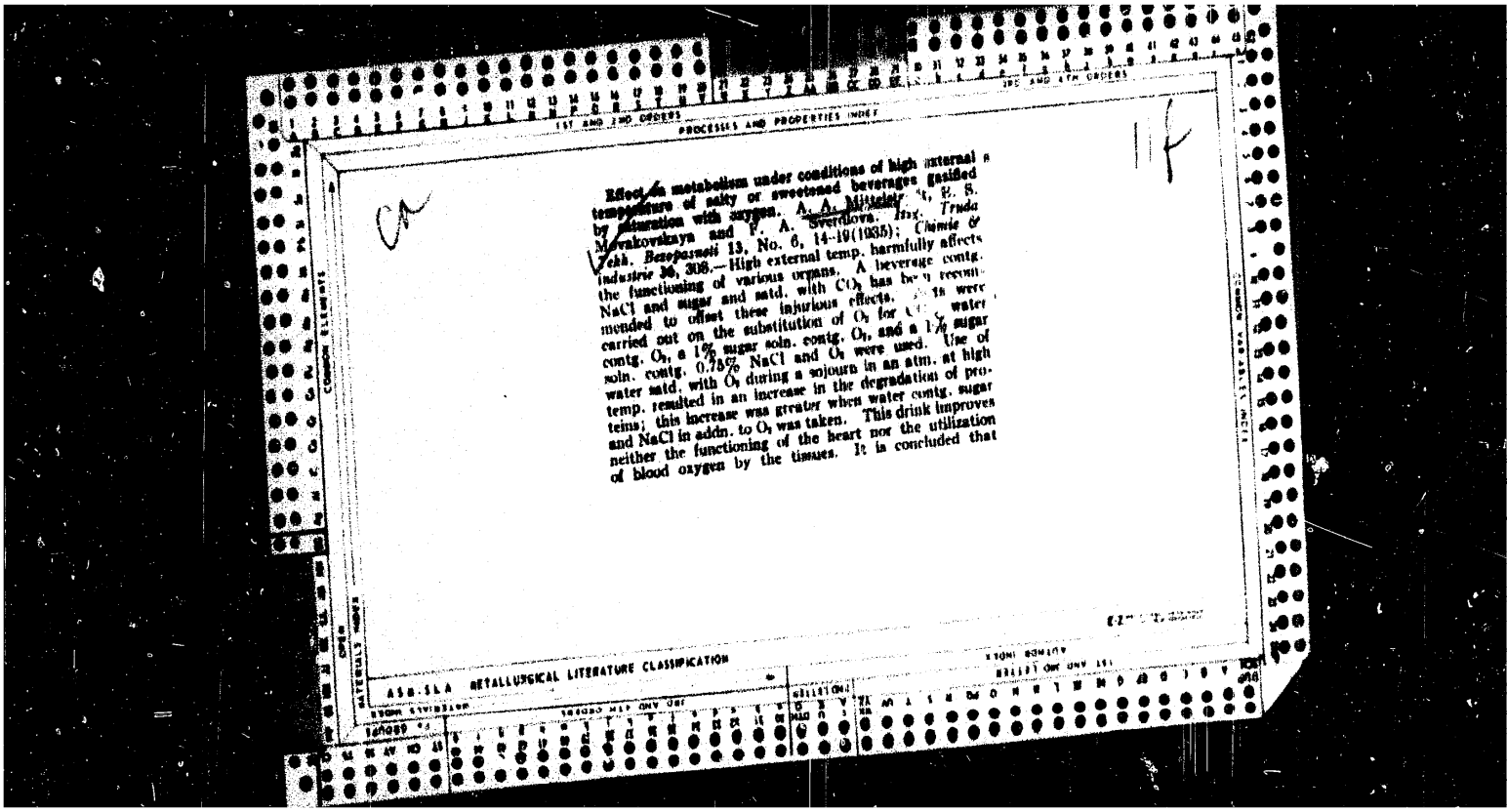
11f

Changes in metabolism in certain cases of emotional stimulation. A. A. Mitrishtedt and E. S. Novakovskaya. *Arch. sci. biol.* (U. S. S. R.) 45, No. 3, 119-26 (in English 126)(1937).—Studies are reported on 2 dogs and 2 men. The body wt., O_2 consumption, urinary vol., total N, and creatinine and creatine excretion were detd. before and after emotional disturbances (sound effects for the dogs, lectures and exams. for the men). Emotional stimulation was followed by loss of wt., increased O_2 consumption and loss of body protein and appearance of urinary creatine. The role of inhibitory factors in the nervous control of metabolism is discussed. W.A.P.

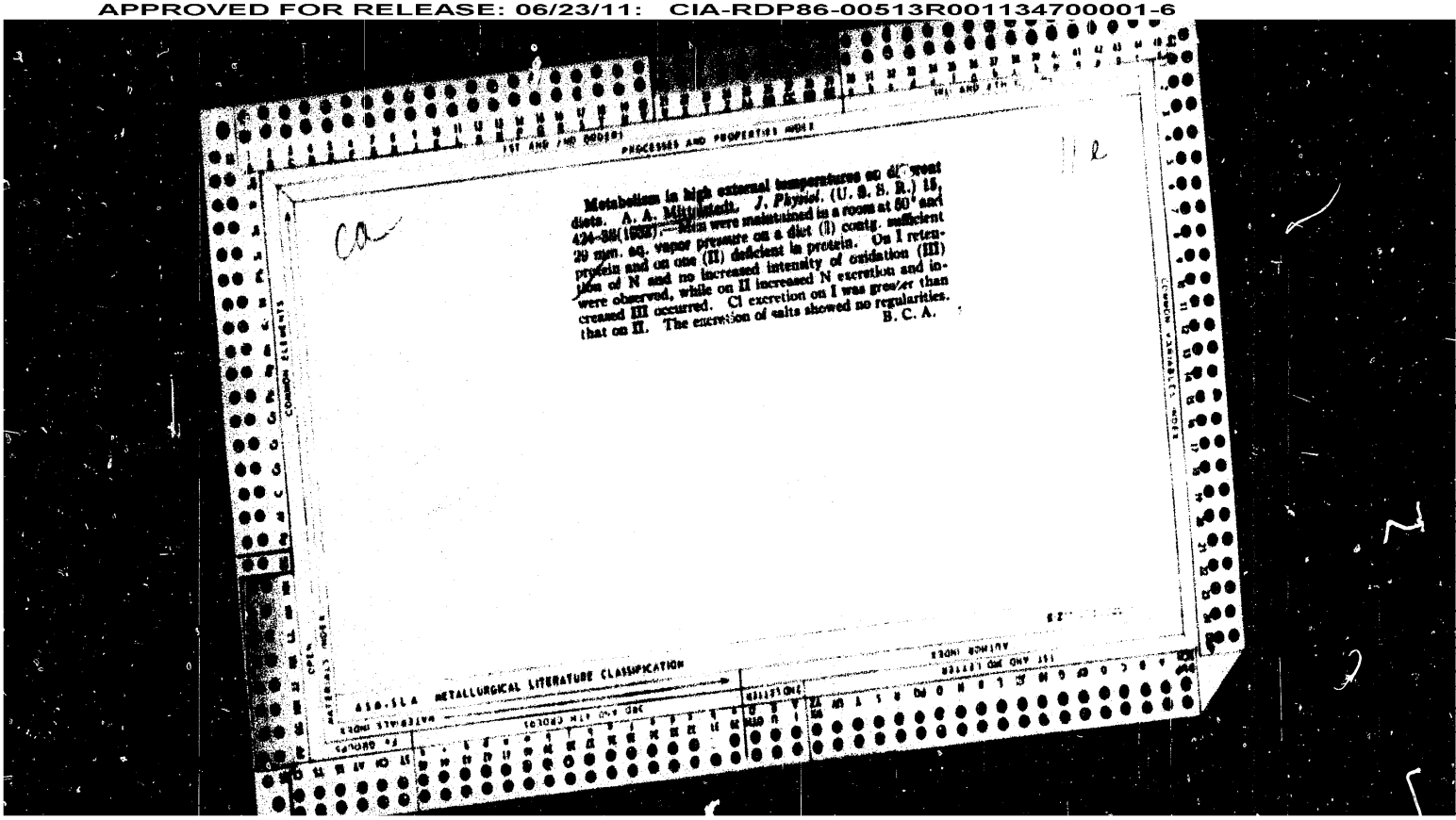


Relation between the allergic reaction and metabolic changes. A. A. Mittelshtedt, E. S. Novakovskaya, E. A. Sverdlova and K. P. Vilkoviskaya. *Bull. biol. med. exptl. U. R. S. S.* 1, 247-9(1936); *Physiol. Abstracts* 22, 689. During the development of, and at the height of, sensitization in man, characteristic metabolic changes were found concerning nitrogen, salts, water and oxygen. This is interpreted as change in neurohumoral regulation.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Effect on metabolism under conditions of high external temperature of salty or sweetened beverages gasified by saturation with oxygen. A. A. Mikulaty, R. S. Movakovskaya and F. A. Sverdlova. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Khim. Promyshlennosti* 13, No. 6, 14-19(1935); *Chemie & Industrie* 36, 308.—High external temp. harmfully affects the functioning of various organs. A beverage contg. NaCl and sugar and satd. with CO_2 has been recommended to offset these injurious effects. Expts. were carried out on the substitution of O_2 for CO_2 in water soln. contg. O_2, a 1% sugar soln. contg. O_2, and a 1% sugar contg. 0.75% NaCl and O_2 were used. Use of water satd. with O_2 during a sojourn in an atm. at high temp. resulted in an increase in the degradation of proteins; this increase was greater when water contg. sugar and NaCl in addn. to O_2 was taken. This drink improves neither the functioning of the heart nor the utilization of blood oxygen by the tissues. It is concluded that



Metabolism in high external temperatures on different diets. A. A. Mitrofanoff. *J. Physiol.* (U. S. S. R.) 15, 424-38(1933).—Men were maintained in a room at 80° and 29 mm. aq. vapor pressure on a diet (I) contg. sufficient protein and on one (II) deficient in protein. On I retention of N and no increased intensity of oxidation (III) were observed, while on II increased N excretion and increased III occurred. Cl excretion on I was greater than that on II. The excretion of salts showed no regularities.
B. C. A.

MITTEL'MAN, Yuda Nokhimovich; ZARKEVICH, N.F., red.; BYKOV, N.M., tekhn. red.

[X-ray examination of the large joints in patients of an orthopedic traumatologic clinic] Rentgenograficheskoe issledovanie krupnykh sustavov u bol'nykh ortopedo-travmatologicheskoi kliniki. Kiev, Gosmedizdat USSR, 1962. 235 p. (MIRA 16:7)

(JOINTS—RADIOGRAPHY)

MITTEL'MAN, S. Ya.

Timonov, V. V., Ushakov, P. V. , Mittel'man, S. Ya., Konstantin Mikhaylovich Deryugin as an Oceanologist. Wworks of the GOIN, No.1 (13) 1947 (9-18)

Rpt. U 2392, 22 Sept 1952,

MITTELMAN, M.

"Pine Fungus Causing Blue Stain Disease of Timber and Its Effect on Quality", P. 192, FAIPAR, Vol. 4, No. 6, June 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

MITTEL'MAN, L.M., kand.tekhn.nauk; GROMOV, N.K., inzh.

Concerning S.E.Shitsman's article "Methodology for accounting for and standardization of technical and economic indices of thermal electric power plants." Elek. sta. 33 no.8:89-91 Ag '62. (MIRA 15:8)

(Electric power plants—Standards) (Shitsman, S.E.)

MITTELMAN, L. and BUNKIN, Y. and SOKOLOV, ANDRONOV, B. M.
MITELMAN

"Economic Trends in Production of Electricity and Heat by USSR Electric Utility Power Stations Burning Organic Fuel"

report presented at the 14th Sectional Meeting of the World Power Conference, Montreal, Canada, 7-12 Sep 1958.

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MITTEL'MAN, L.M., kand.tekhn.nauk

Methods for determining the technical and economic characteristics of steam power plants with relation to the delivered power. Elek.sta. 28 no.12:2-7 D '57. (MIRA 12:3)
(Electric power plants)

Mittel'man, L. M.

AID P - 4048

Subject : USSR/Power

Card 1/1 Pub. 26 - 6/33

Author : Mittel'man, L. M., Kand. Tech. Sci.

Title : Determining the efficiency of thermal power plants on the basis of one single index of fuel consumption.

Periodical : Elek. sta., 12, 20-24, 1955

Abstract : The method of determining the operational efficiency of power plants by computing the amount of kwhr by the volume of fuel utilized is discussed. A greater accuracy in computations is expected from the designers of power equipment.

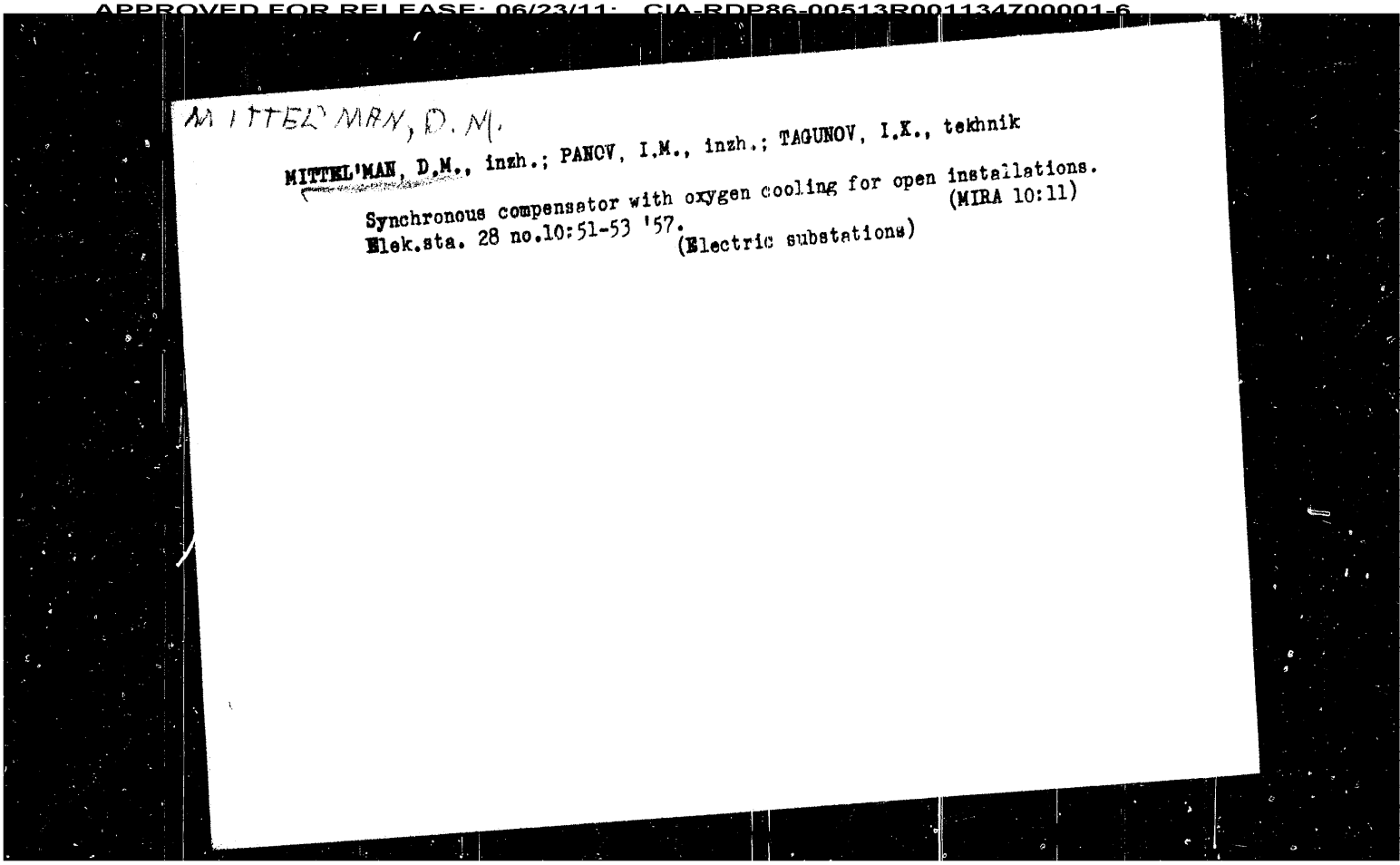
Institution : None

Submitted : No date

MITTELMAN, Laszlo, dr.

10 years of the development of drug supply and future role of pharmacy in medical aid. Nepegeszsegugy 36 no.4-5:126-133 Apr-May 55.

(PHARMACY, in Hungary.)



MITTEL'MAN, D.M.

MITTEL'MAN, D.M., inzh.; PANOV, I.M., inzh.; TAGUNOV, I.K., tekhnik

Synchronous compensator with oxygen cooling for open installations. Elek.sta. 28 no.10:51-53 '57. (MIRA 10:11)
(Electric substations)

MITTEL'MAN, B.M., inzh.

Increase in the life of condenser tubes cooled by sea water.
Energetik 11 no.8:16-18 Ag '63. (MIRA 16:10)

LYSOGOROV, A.M., slesar'; MITTEL'MAN, B.M., inzh.

Balancing of the generator rotor and measurement of the vibration of the rotor shaft. Elek. sta. 32 no. 5:81-82 My '61. (MIRA 14:5)

(Turbogenerators)

MITTELMAN, A.; BALANEANU, M.

Internal reserves of increasing the light industry production. Probleme econ 16 no.8:160 Ag'63.

1. Director, Intreprinderea "Teba" (for Mittelman). 2. Inginer Sef, Intreprinderea "Teba", Arad (for Balaneanu).

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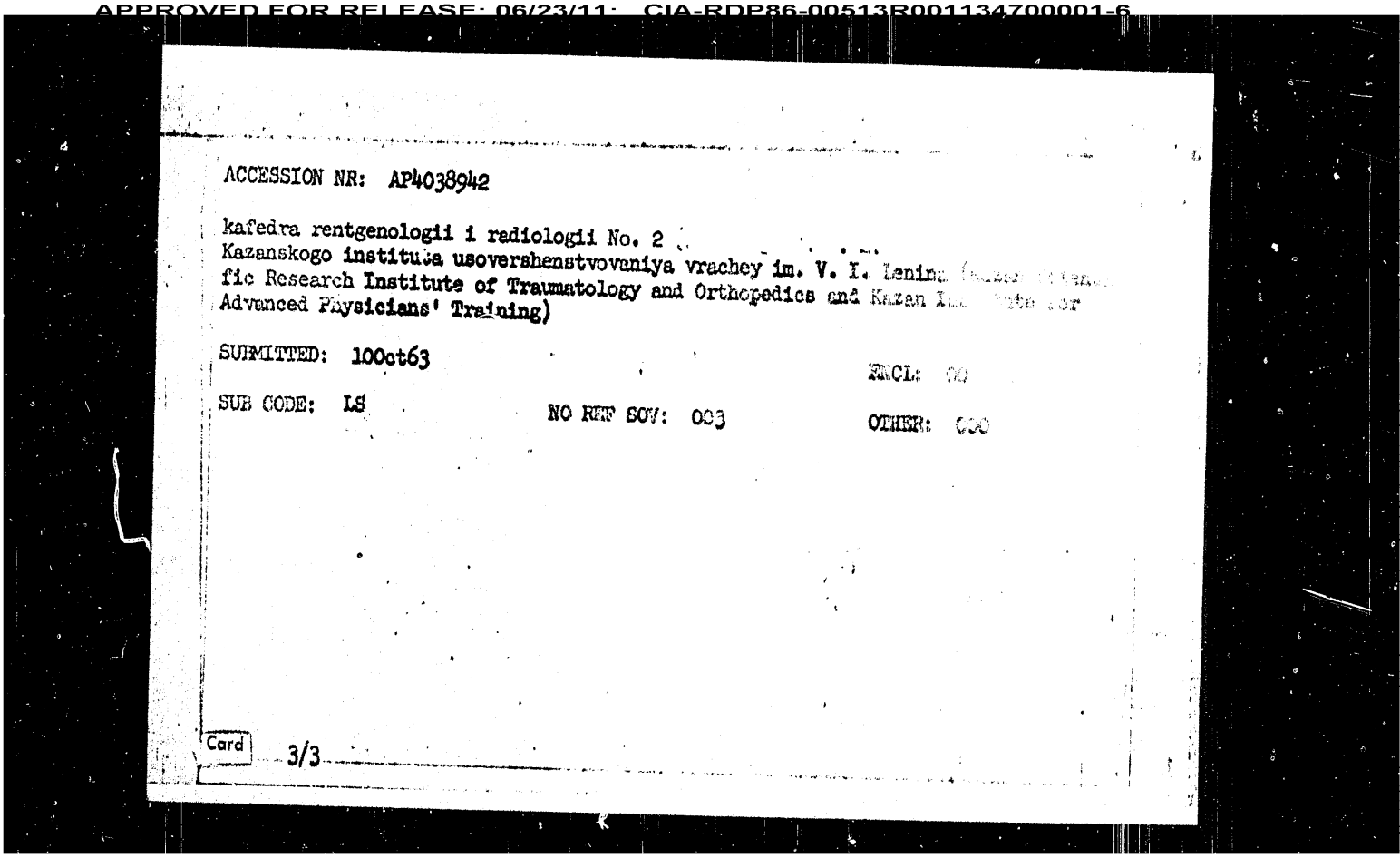


ACCESSION NR: AP4038942

kafedra rentgenologii i radiologii No. 2
Kazanskogo institute usovershenstvovaniya vrachey im. V. I. Lenina [illegible]
fic Research Institute of Traumatology and Orthopedics and Kazan [illegible]
Advanced Physicians' Training)

SUBMITTED: 10Oct63

ENCL: 00

SUB CODE: LS

NO REF SOV: 003

OTHER: 000

Card 3/3

ACCESSION NR: AP4038942

infected with staphylococcus culture on the 2, 4 or 6th day after irradiation. collateral circulation developed only if the culture was injected in the first 2 days. Later infection led to insignificant local but extensive [illegible] reaction and early death. Infection on the first day led to considerable local reaction. Systemic and local reactivity of the organism thus appear in stages and decrease with time. No development of collateral circulation was observed when the 15 dogs of the 3rd series were injected 2-10 days prior to irradiation, although local reaction was intense. They lived somewhat longer (probably due to the development of antibodies). Collateral lymph circulation was thus found to develop as an active reaction of the integral organism rather than a result of mechanical obstruction. This was confirmed in 3 test series with tourniquets. Collateral circulation appeared one day after removing the tourniquet if this latter had been applied in the first 2 days following irradiation. Later application resulted in early death. These results point towards the necessity of early remedial action in radiation sickness, before the reactive mechanism of the organism has broken down. Orig. art. has: 4 figures.

ASSOCIATION: Patofiziologicheskaya laboratoriya Kazanskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii

Card 2/3

ACCESSION NR: AP4038942 S/0241/64/009/005/0039/0044

AUTHOR: Akayantsev, M. I.; Gol'dshteyn, D. Ya.; Mittel'berg, Ya. L.

TITLE: Compensatory possibilities of the lymphatic system in acute radiation sickness

SOURCE: Meditsinskaya radiologiya, no. 5, 1964, 39-44

TOPIC TAGS: lymphatic system, collateral lymph vessel, acute radiation sickness, collateral lymph circulation stimulus, intravital lymphography, systemic radiation reaction, local radiation reaction, reactive mechanism, infective lymphatic stimulus, mechanical lymphatic stimulus

ABSTRACT: The ability of the body to create collateral lymph circulation under these conditions was studied in the pelvic extremities of dogs by means of infection (Staphylococcus aureus culture) or mechanical irritation (tourniquet) and a combination. The 62 dogs, divided into 6 lots, received a 800 r x-ray dose close to lethal. Data were derived from intravital lymphography. In the first test series on 12 dogs penetrability of the system increased considerably following radiation, but no formation of collateral circulation was seen. In the 2nd series on 24 dogs

Card 1/3

MITTEL'BERG, Ya.B.

Condition of the lymphatic system under the influence of acute ionizing radiations according to data obtained by intravital lymphography. Med.rad. 6 no.4:33-36 '61. (MIRA 14:12)
(LYMPHATICS--RADIOGRAPHY)

MITTEL'BERG, Ya.B.

Condition of the lymphatic pathways in acute radiation injury according to data from intravital lymphography. Med. rad. 6 no.1:34-36 '61. (MIRA 14:3)

(RADIATION--PHYSIOLOGICAL EFFECT)
(LYMPHATICS)

ADRIANOVSKIY, A.V.; GOL'DSHTEYN, D.Ye., prof.; GOL'DSHTEYN, M.I.; MITTEL'BERG, Ya.B.; SUKHORUKOV, B.Z.; FAYZULLIN, M.Kh., prof.

Seventh All-Union Congress of Radiologists. Kaz.-med.zhur. 40 no.2:99-102 Mr-Ap '59. (MIRA 12:11)

1. Zaslushennyy deyatel' nauki Tatarskoy ASSR (for D.Ye.Gol'dshteyn).

(RADIOLOGY, MEDICAL--CONGRESSES)

FAYZULLIN, M.Kh., professor; MITTEL'BERG, Ya.B.

Reactions to pneumoencephalography in traumatic encephalopathy with an epileptic syndrome. Vop.neirokhir. 20 no.2:54-55 Mr-Ap '56. (MLRA 9:7)

1. Iz kafedry rentgenologii i iz neyrokhirurgicheskoy kliniki Kazanskogo gosudarstvennogo instituta usovershenstvovaniya vrachey imeni V.I.Lenina

(BRAIN, wounds and inj.
causing epileptic synd., pneumoencephalography)
(WOUNDS AND INJURIES
brain, causing epileptic synd., pneumoencephalography)
(EPILEPSY
post-traum. epileptic synd. in brain inj., pneumoencephalography)

MITTEK, Janusz, mgr inż.

Suitability of using boilers with multistage evaporation in industrial plants. Gosp paliw 12 no.2:64-67 F '64.

MITTEK, Janusz, mgr inz.

New heat and power plant in the Rokita Nadodrzanskie Organic Industrial Works. Gosp paliw 11 no.2:47-50 F '63.

MITTEK, Janusz, mgr., inz.

Condensate return for power plant needs under the conditions of the chemical industry. Pt. 2. Energetyka przem 9 no.12:419-422 D '61.

(Poland--Power plants)

MITTEK, Janusz, mgr., inz.

Return of the productive steam condensate for electric heating plants in the conditions of chemical industries. Pt. 1.(To be contd) Energetyka przem 9 no.11:388-391 '61.

MITT, K.L.

Morphology and dynamics of the Anadyr-Olenek shore of the Laptev Sea, Okeanologiia 4 no.4:660-668 '64. (MIRA 17:10)

1. Yakutskoye geologicheskoye upravleniye, Amginskaya ekspeditsiya.

MITT, K.L.

Moraines in the southeastern coast of Anabar Bay. Biul. Kom. chetv. per. no. 28:127-134 '63. (MIRA 17:5)

MITT, K.L.

Preliminary results of the studies of Quaternary sediments and geomorphology of the Anabar-Olenek interfluve north of 71° N. Mat.po geol.i pol.iskop.IAk.ASSR no.5:106-109 '61. (MIRA 15:7)
(Anabar Valley--Geology) (Olenek Valley--Geology)

BOYARSKIY, O. G.; MITT, K. L.

New data on fossil ice in the tundra of the Anabar-Olenek interfluve. Merzl. issl. no.1:154-161 '61.
(MIRA 16:1)

(Anabar Valley--Ice)
(Olenek Valley--Ice)

BOYARSKIY, O. G.; MITT, K. L.

Presence of relief forms of the glacial accumulation in the tundra of the Anabar-Olenek interfluve. Merzl. issl. no.1: 145-153 '61. (MIRA 16:1)

(Anabar Valley--Landforms)
(Olenek Valley--Landforms)

MITT, K.L.

Nature of dells in the Daldyn area. Vop. geog. no.46:28-34 '59.
(MIRA 12:12)

(Daldyn Region--Valleys)

MITSYUK, B.M.; DOROSH, A.K.; SKRYSHEVSKIY, A.F.; VYSOTSKIY, Z.Z.

X-ray diffraction study of dehydration of silicic acid hydrogel.
Koll. zhur. 27 no.6:846-849 N-D '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN UkrSSR imeni L.V. Pisarzhevskogo i Kafedra molekulyarnoy fiziki Kiyevskogo universiteta.

MITSYUK, B.M.; VYSOTSKIY, Z.Z.; POLYAKOV, M.V.

Role played by the polarity of the intramicellar liquid and by the intensity of its interaction with the surface of silicic acid hydrogel particles in the formation of silica gel texture. Dokl. AN SSSR 155 no.6:1404-1406 Ap '64. (MIRA 17:4)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN UkrSSR. Predstavleno akademikom P.A.Rebinderom.

MITSYUK, B.M.; VYSOTSKIY, Z.Z.

Possibility of changing the texture of silicic acid xerogels in the process of vapor sorption. Dokl. AN SSSR 152 no.5:1166-1168 O '63. (MIRA 16:12)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN UkrSSR. Predstavleno akademikom M.M.Dubininym.

LAZAREV, A.A., inzh.; MITSYN, P.V., inzh.; NIKIFOROV, A.A., inzh.; ROZET, I.Ya., inzh.; KHYUKOV, V., red.; BALLOD, A., tekhn. red.

[Dismantling and assembling the S-100 tractor] Razborka i sborka traktora S-100. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1962. 231 p. (MIRA 15:4)

1. Chelyabinskiy traktornyy zavod (for Lazarev, Mitsyn, Nikiforov, Rozet).
(Tractors--Maintenance and repair)

LAZAREV, Anatoliy Abramovich, inzh.; MITSYN, P.V., inzh.; NIKIFOROV, A.A., inzh.; ROZET, I.Ya., inzh.. Prinimali uchastiye: ZLOTNIK, M.I., inzh.; MAGARILLO, B.L., inzh.. KAV'YAROV, I.S., inzh., red.; TRASHUTIN, I.Ya., inzh., red.; KOBYLYAKOV, L.M., red.; PEVZNER, V.I., tekhn.red.

[Manual for operating the S-100 tractor] Rukovodstvo po ekspluatatsii traktora S-100. Pod red. I.S.Kav'iarova i I.IA. Trashutina. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 263 p. (MIRA 13:5)
(Tractors)

MITSYN, P.V.

LAZAREV, Anatoliy Abramovich, inzh.; MITSYN, P.V., inzh.; NIKIFOROV, A.A., inzh.; ROZET, I.Ya., inzh.; MAMONTOV, Ye.V., inzh.; KOBYLYAKOV, L.M., red.; GOR'KOVA, Z.D., tekhn.red.

[Manual on the operation of S-80 and S-100 tractors] Rukovodstvo po ekspluatatsii traktorov S-80 i S-100. Pod red. E.V.Mamontova. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1957. 357 p. (MIRA 11:1)
(Tractors)

MITSYN, P.V.

LAZAREV, A.A., inzhener; MITSYN, P.V., inzhener; NIKIFOROV, A.A., inzhener; ROZNT, I.Ya., inzhener; MIMONTOV, Ye.V., inzhener, redaktor; STUPIN, A.K., redaktor izdatel'stva; UVAROVA, A.F., tekhnicheskiy redaktor

[Catalog of S-80 tractor parts] Katalog detalei traktora S-80. Izd. 2-oe, ispr. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 225 p. (MIRA 10:4)

1. Chelyabinskiy traktornyy zavod, Chelyabinsk.
(Tractors--Apparatus and supplies--Catalogs)

MITSYN, P.V., redaktor

[The S-100 tractor; a brief manual on its operation] Traktor S-100; kratkoe rukovodstvo po ekspluatatsii. Moskva, Mashgiz, 1956. 158 p.
(Tractors) (MIRA 10:6)

MITSYN, P.V.

LAZARNV, A.A., inzhener; MITSYN, P.V., inzhener; NIKIFOROV, A.A., inzhener; ROZNT, I.Ya., inzhener; TROITSKIY, I.F., inzhener; SHCHERBINA, V.I., inzhener; BALZHA, M.F., inzhener, redaktor; TRASHUTIN, I.Ya., inzhener, redaktor; PESTRYAKOV, A.I., redaktor; ORLOVA, V.V., tekhnicheskiy redaktor.

[Assembling and disassembling the "Stalinets-80" tractor] Razborka i sborka traktora "Stalinets-80." Pod red. M.F.Balshi i I.IA.Trashutina. 4-e izd., ispr. i dop. Moskva, Gos. izd-vo selkhoz. lit-ry, 1954. 429 p. (MLRA 7:10)

(Tractors)

LAZAREV, A.A., inzh.; MITSYN, P.V., inzh.; NIKIFOROV, A.A., inzh.; ROZET, I.Ya., inzh.; SHCHEBINA, V.I., inzh.; DEM'YANOVICH, A.N., laureat Stalinskoy premii, red.; TIKHONOV, A.Ya., tekhn. red.

[Catalog of parts of the "Stalinets-80" tractor]Katalog detalei traktora "Stalinets-8C." Moskva, Moskva, Mashgiz, 1953. 217 p. (MIRA 16:7)

1. Glavnyy inzhener Chelyabinskogo traktornogo zavoda im. Stalina (for Dem'yanovich). (Tractors—Catalogs)

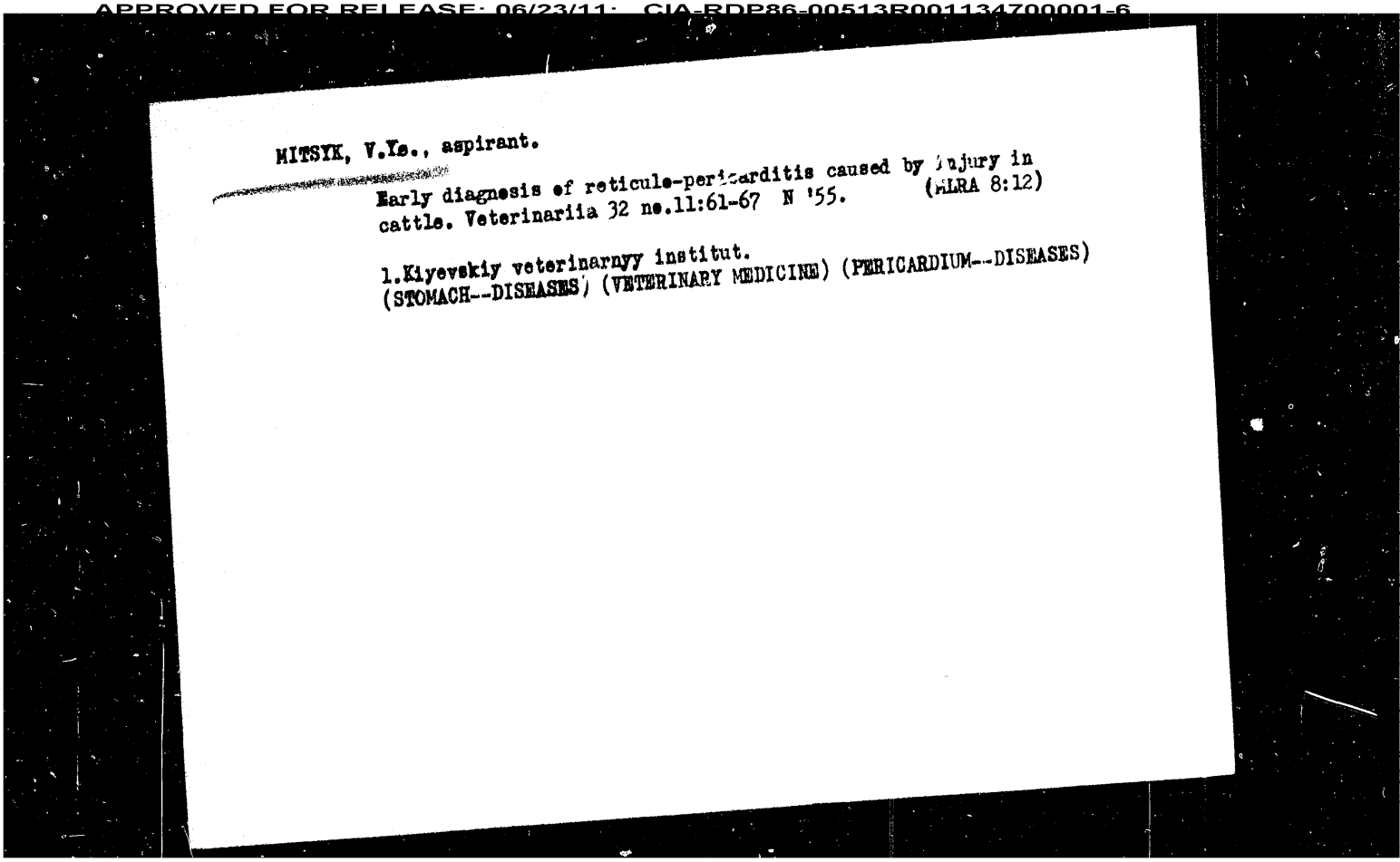
MITSYK, V.Yu.

[Trace elements in the feeds of farm animals] Mikroelementy v hodivli sil's'kohospodars'kykh tvaryn. Kyiv, Derzh. vyd-vo sil's'kohospodars'koi lit-ry Ukrains'koi RSR, 1962. 163 p. (MIRA 16:4)
(Trace elements) (Feeds--Analysis)

VLASYUK, P.A., akademik, otv. red.; KOLOMIYTSEVA, M.G., prof., red.; KRUPSKIY, N.K., prof., red.; KLIMOVITSKAYA, Z.M., doktor biol. nauk, red.; KURINNAYA, M.F., kand. med. nauk, red.; MITSYK, V.Ye., kand. vet. nauk, red.; KAPITANCHUK, V.A., red.; RUDAKOVA, E.V., kand. biol. nauk, red.; SKUTSKAYA, N.P., red.

[Use of trace elements in agriculture; Republic interdepartmental collection of papers] Primenenie mikroelementov v sel'skom khoziaistve; Respublikanskii mezhvedomstvennyi sbornik. Kiev, Naukova dumka, 1965. 218 p. (MIRA 18:7)

1. Akademiya nauk URSR, Kiev. 2. Institut fiziologii rasteniy Ukr.SSR (for Vlasyuk, Rudakova).



MITSYK, V.Ye., aspirant.

Early diagnosis of reticule-pericarditis caused by injury in cattle. Veterinariia 32 no.11:61-67 N '55. (MLRA 8:12)

1.Kiyevskiy veterinarnyy institut.
(STOMACH--DISEASES) (VETERINARY MEDICINE) (PERICARDIUM--DISEASES)

VLASYUK, P.A., akademik, glav. red.; OSTROVSKAYA, L.K., doktor biol. nauk, red.; ZADERIY, I.I., doktor sel'khoz. nauk, red.; KURINNAYA, M.F., kand. med. nauk, red.; MITSYK, V.Ye., kand. vet. nauk, red.; KAPITANCHUK, V.A., red.; SKUTSKAYA, N.P., red.

[Microelements in the life of plants, animals and man; transactions of the Coordinating Conference of the Special Commission of the Academy of Sciences of the Ukrainian S.S.R. held on February 22-23, 1963] Mikroelementy v zhizni rastenii, zhivotnykh i cheloveka; trudy koordinatsionnogo soveshchaniia problemnoi komissii AN USSR ot 22-23 fevralia 1963 g. Kiev, Naukova dumka, 1964. 323 p. (MIRA 18:2)

1. Akademiya nauk URSR, Kiev. Instytut fiziologii roslyn.

PEYVE, Ya.V., akademik, otv. red.; VLASYUK, P.A., akademik, red.; SIROCHENKO, I.A., prof., red.; VOYNAR, A.I., prof., red.; MINORIK, A.V., kand. biol. nauk, red.; OSTROVSKAYA, L.K., doktor biol. nauk, red.; ZADERIY, I.I., doktor sel'khoz. nauk, red.; KURINNAYA, M.F., dots., red.; KLIMOVITSKAYA, Z.M., kand. biol. nauk, red.; MITSYK, V.Ye., kand. vet. nauk, red.; KAPITANCHUK, V.A., red.; NAD'KO, M.K., red.

[Trace elements in agriculture and medicine; materials] Mikroelementy v sel'skom khoziaistve i meditsine; materialy. Kiev, Gossel'khozizdat USSR, 1963. 689 p. (MIRA 18:1)

1. Vsesoyuznoye soveshchaniye po voprosam primeneniya mikroelementov v sel'skom khozyaystve i meditsine, 4th, Kiev, 1962. 2. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy AN Ukr.SSR (for Ostrovskaya, Vlasyuk). 3. Institut biologii AN Latviyskoy SSR (for Peyve). 4. Kiyevskiy meditsinskiy institut (for Kurinnaya). 5. Donetskiy meditsinskiy institut im. A.M.Gor'kova (for Voynar). 6. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii i biokhimii sel'skokhozyaystvennykh zhivotnykh (for Mitsyk). 7. Belotserkovskiy sel'skokhozyaystvennyy institut (for Zaderiy).

MITSYK, A.; SHMEYSSER, M.

Let's start the attack with joint forces. Okhr. truda i sots. strakh. 5 no.8:8-12 Ag '62. (MIRA 15:7)

1. Predsedatel' komissii okhrany truda shakhtennogo komiteta shakhty No.5 kombinata "Vorkutugol'" (for Mitsky). 2. Zamestitel' predsedatelya komissii sotsial'nogo strakhovaniya shakhtennogo komiteta kombinata "Vorkutugol'" (for Shmeysser).

(Vorkuta--Coal mines and mining--Hygienic aspects)

MITSURA, D.I.

Acute intestinal obstruction. Zdrav. Bel. 7 no.5:30-32 My '61.
(MIRA 14:6)

1. Iz khirurgicheskogo otdeleniya Turovskoy raybol'nitsy (glavnyy vrach rayona N.Ya. Astrovik).
(INTESTINES--OBSTRUCTIONS)

ACCESSION NR: AP4040295

meter tube at a pressure of 3.3 mm Hg and was excited by 10 microsec current pulses of 3 or 4 amp. Microwaves of 3.2 cm wavelength were employed in 1 microsec pulses. The attentuation was measured by a substitution method, and the phase shift was obtained from the shift in the position of standing wave nodes. How the nodes were located during the 1 microsec pulses is not disclosed. The recombination was found to take place considerably more slowly than calculated by the theory of V.L.Granovskiy (ZhETH 13,123,1943). Similar results have been obtained by G.N.Zastenker and YeF.Gubochkina (Voprosy* radioelektroniki, [illegible]RE, No.6,1961). The discrepancy is ascribed to rapid loss of electron energy by collisions of the first kind. The agreement with theory was improved by calculating the energy lost by the electrons to gas molecules from the experimental values of E/p and employing this in the theoretical calculations of electron densities and temperature. Orig.art.has: 7 formulas, 3 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im.M.V.Lomonosova, Fizicheskiy fakul'tet (Physics Department, Moscow State University)

SUBMITTED: 03Jun63 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: ME NR REF SOV: 004 OTHER: 005

Card 2/2

ACCESSION NR: AP4040295 S/0057/64/034/006/0961/0964

AUTHOR: Mitsuk, V.Ye.; Sizov, V.D.

TITLE: Application of a microwave method for measuring electron concentrations exceeding the critical concentration

SOURCE: Zhurnal Tekhnicheskoy fiziki, v.34, no.6, 1964, 961-964

TOPIC TAGS: plasma, plasma physics, microwave plasma, electron concentration, recombination phenomena, neon

ABSTRACT: The authors describe the microwave method for measuring electron concentrations exceeding the critical concentration $m\omega^2/4\pi e^2$ employed by L.Goldstein and T.Sekiguchi (Phys.Rev.109,625,1958), T.Sekiguchi and R.C.Herndon (Ibid.112,1,1958), and S.Takeda and M.Roux (J.Phys.Soc.Japan 16,No.7,1961), and discussed by S.J.Buchsbaum and S.C.Brown (Phys.Rev.106,196,1957). This consists in measuring the attenuation and phase shift of TE_{10} waves in a rectangular waveguide traversed in the direction of the electric field by a small tube containing the plasma. The application of this method is limited by the skin effect. This diagnostic technique was employed to investigate recomination in neon plasma. The plasma was contained in a 3 mm dia-

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L 38900-66 EWT(1)

ACC NR: AP6029724 SOURCE CODE: UR/0109/66/011/005/0966/0967

AUTHOR: Zernov, D. V.; Timofeyev, P. V.; Fursov, V. S.; Migulin, V. V.; Spivak, G. V.; Spasskiy, B. I.; Nilender, R. A.; Grozdover, S. D.; Shemayev, A. M.; Solntsev, G. S.; Kuzovnikov, A. A.; Zaytsev, A. A.; Vasil'yeva, M. Ya.; Mitsuk, V. Ye.; Dubinina, Ye. M.; Zheludeva, G. A.

ORG: none

TITLE: Nikolay Aleksandrovich Kaptsov

SOURCE: Radiotekhnika i elektronika, v. 11, no. 5, 1966, 966-967

TOPIC TAGS: electric engineering personnel, magnetron, klystron, corona discharge, gas conduction, gas discharge plasma

ABSTRACT: N. A. Kaptsov passed away 10 February 1966. He was a student of the famous P. N. Lebedev, and performed many fundamental investigations in the development of modern electronics. He was the creator and leader of the chair of electronics of Moscow State University. He developed the concept of phase grouping of electrons. His ideas are the basis for the development of the magnetron and klystron. He developed the concept explaining the phenomenon of corona discharge. He also developed ideas connected with formation of gas conduction and phenomena in a gaseous-discharge plasma. Kaptsov served for years as the head of the physical laboratory and consultant to the Moscow Electron Tube Plant. He was the author of numerous books, including "Physical Phenomena in Vacuum and in Gases, which was translated into foreign languages; he also created and taught numerous electronics courses. [JPRS: 36,501]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1 mlp

0918 0203

ACC NR: AP6031582

than the theoretical ones in the entire region of the investigated pressures, the difference increasing with decreasing pressure; this can apparently be attributed to the increase in the role of diffusion loss with decreasing pressure. To obtain more details on the role of the diffusion losses, the threshold field intensity was measured with focusing lenses having different focal distances (from 18 to 180 mm). These results show conclusively that in breakdown at optical frequencies, at pressures below atmospheric, diffusion electron losses play an important role during the stage of development of the electron avalanche, and lead to an increase of the threshold field intensity. Other types of losses (recombination and elastic losses) are insignificant under these conditions. Allowance for the diffusion losses, made under the assumption that the diffusion of the electrons from the focusing volume is free and that an important role is played in the investigated gases by slow-electron diffusion due to the Ramsauer effect, gives good agreement between the experimental results and the avalanche theory. Orig. art. has: 3 figures and 1 formula. [02]

SUB CODE: 20/ SUBM DATE: 31May66/ ORIG REF: 001/ OTH REF: 001/ ATD PRESS: 5083

Card 2/2

L 45818-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6031582 SOURCE CODE: UR/0386/66/004/004/0129/0131

AUTHOR: Mitsuk, V. Ye.; Savoskin, V. I.; Chernikov, V. A. 84 B

ORG: Physics Department of the Moscow State University im. M. V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Breakdown at optical frequencies in the presence of diffusion losses

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 4, 1966, 129-131

TOPIC TAGS: laser application, dielectric breakdown, physical diffusion, optic measurement, optic property

ABSTRACT: The authors present results of experiments on breakdown in krypton and xenon at optical frequencies and low pressures. The size of the focusing volume was varied in order to clarify the role of diffusion during breakdown. A ruby laser was used, operating in the single-pulse mode (60 nsec and ~0.5 J). The laser parameters were measured directly during the time of the experiment. Lenses, corrected for aberration, focused the laser beam inside a glass vacuum chamber containing the investigated gas at a fixed pressure. The occurrence of the discharge was monitored visually and by a photoelectric method. The obtained pressure dependence of the light-wave threshold electric field intensity in krypton and xenon is in good qualitative agreement with calculations based on the avalanche theory without account of losses. However, the experimental values of the threshold electric-field intensity were higher

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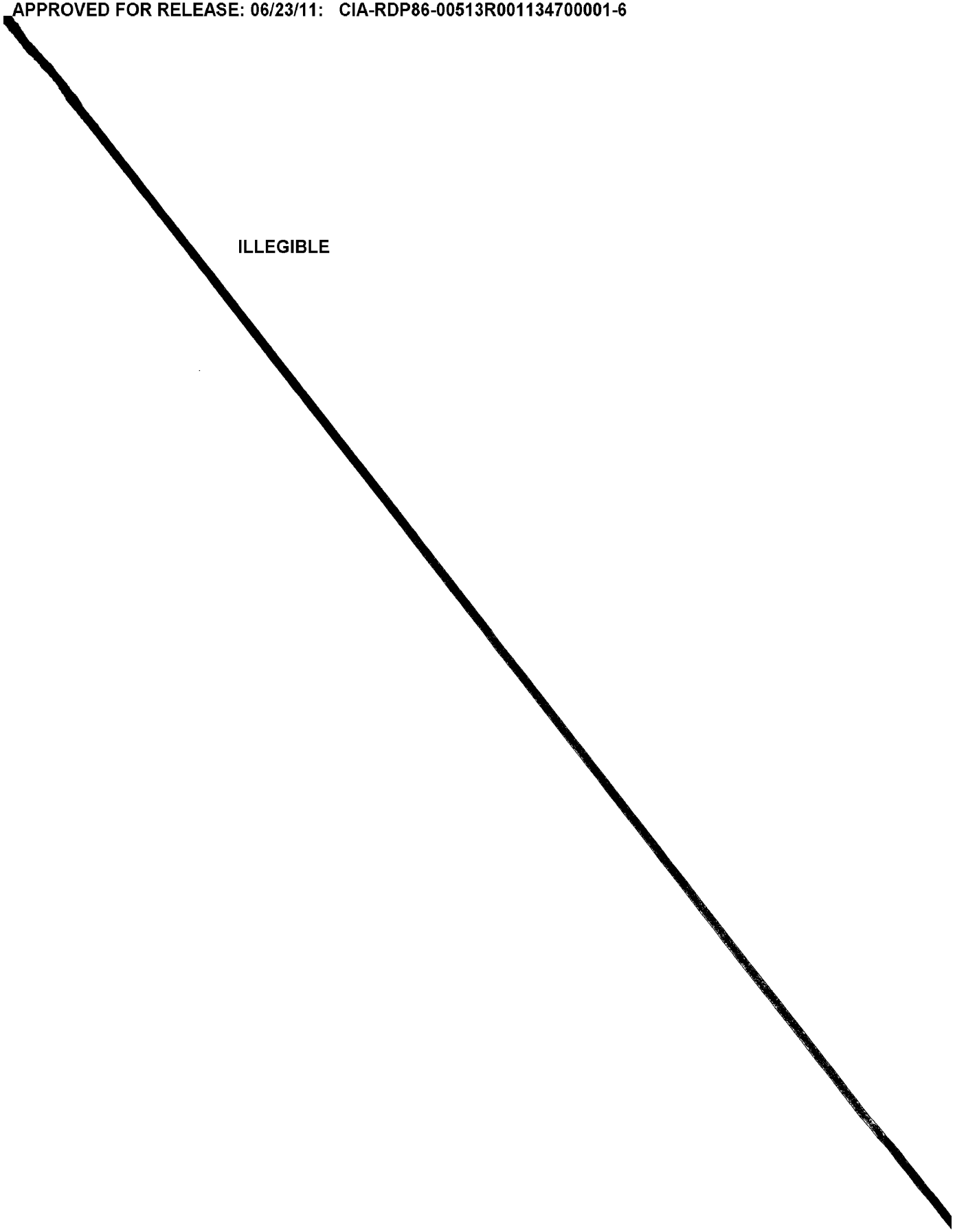

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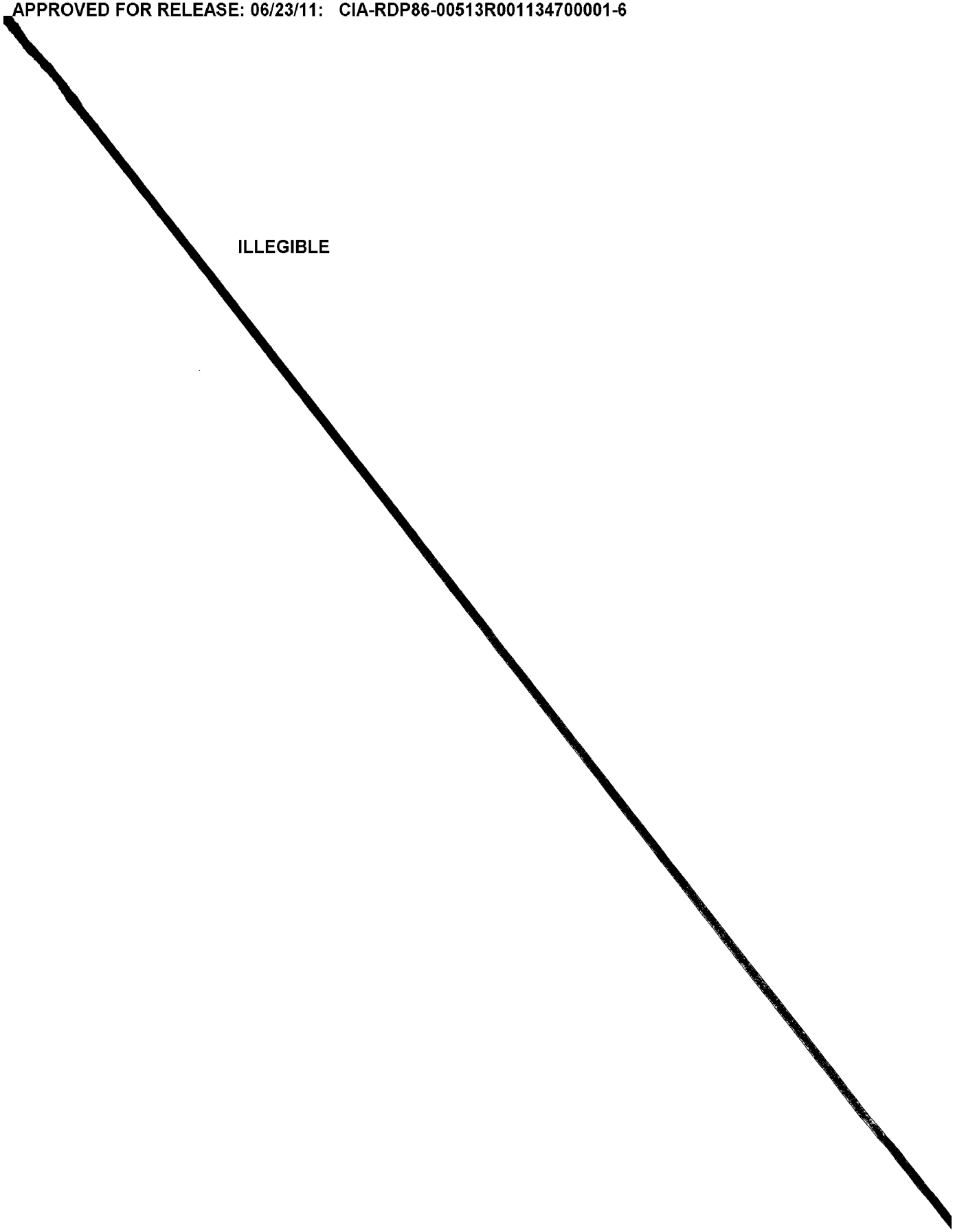

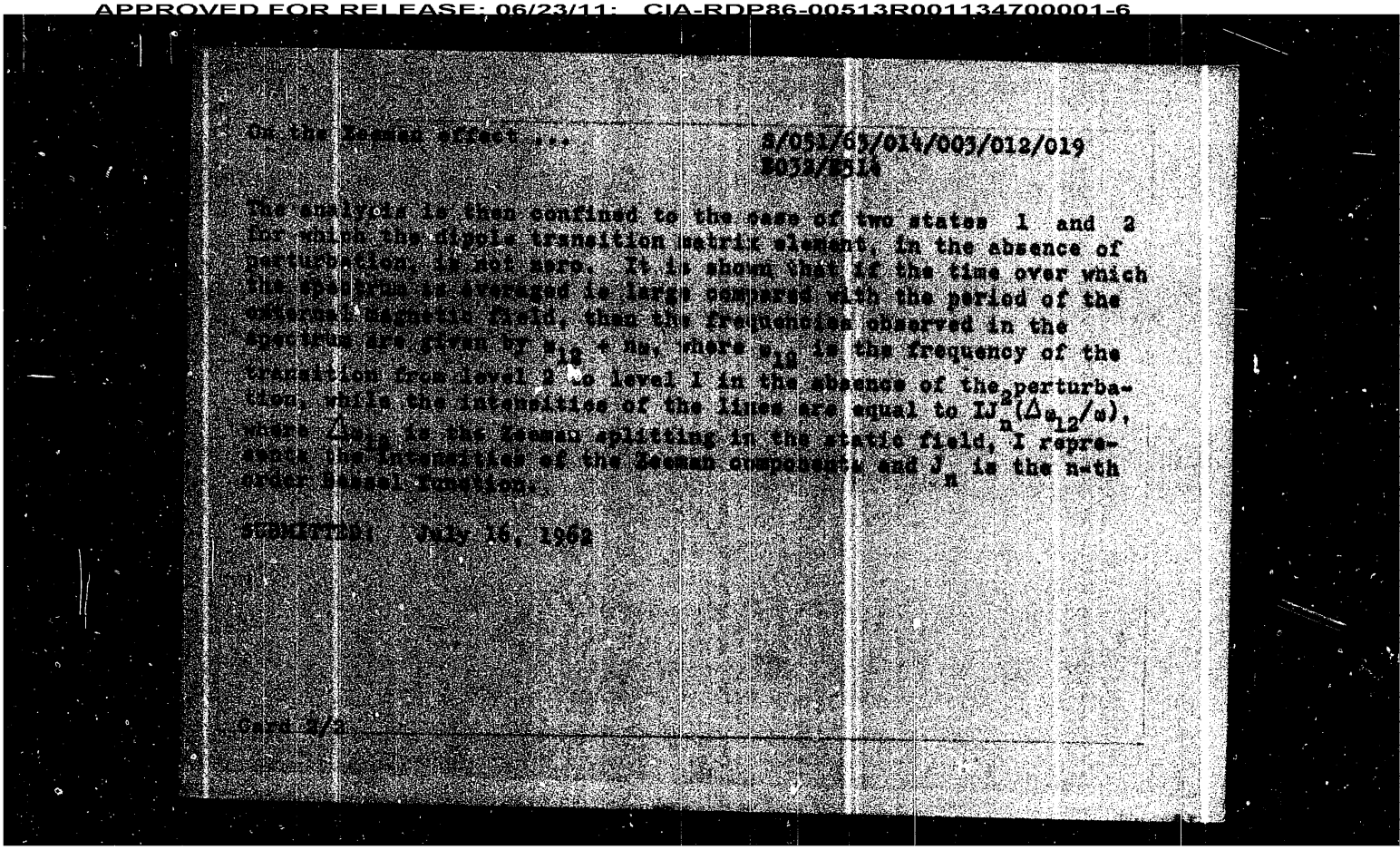

On the Zeeman effect ...

S/051/63/014/003/012/019
E032/E514

The analysis is then confined to the case of two states 1 and 2 for which the dipole transition matrix element, in the absence of perturbation, is not zero. It is shown that if the time over which the spectrum is averaged is large compared with the period of the external magnetic field, then the frequencies observed in the spectrum are given by $\omega_{12} + n\omega$, where ω_{12} is the frequency of the transition from level 2 to level 1 in the absence of the perturbation, while the intensities of the lines are equal to $IJ_n^2(\Delta\omega_{12}/\omega)$, where $\Delta\omega_{12}$ is the Zeeman splitting in the static field, I represents the intensities of the Zeeman components and J_n is the n-th order Bessel function.

Submitted: July 16, 1962

Card 3/3

S/051/63/014/003/012/019
B032/B514

AUTHOR: Mitsuk, V.Ye.

TITLE: On the Zeeman effect in an alternating field

PERIODICAL: Optika i spektroskopiya, v.14, no.3, 1963, 419-420

TEXT: A quantum mechanical treatment of the effect of an alternating magnetic field $\underline{H} = \underline{H}_0 \cos \omega t$ on a radiating atom is reported. The field is assumed to be uniform and the frequency ω is taken to be greater than the line width determined by the conditions in the source but less than the maximum splitting in a static field H_0. Spin-orbit interaction is neglected and the Hamiltonian for the nonrelativistic Schroedinger equation is taken to be equal to the sum of the following two operators:

$$\hat{H}_0 = -\frac{\hbar^2}{2\mu}\nabla^2 + V(r), \quad \hat{H}'(t) = -\frac{e}{\mu c}(\underline{A}\hat{P}) + \frac{i\hbar e}{2\mu c}\,\mathrm{div}\,\underline{A} + \frac{e^2}{2\mu c^2}\underline{A}^2$$

Next, terms of the order of A^2 are neglected and it is assumed that [illegible]. [illegible] the perturbation operator is $\hat{H}'(t) = $ [illegible] (3)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700001-6

The Electric Field in the Microwave Plasma as a Time Function

SOV/56-36-5-67/76

photoelectric scanning unit on the photomultiplier FEU-19; separation of lines was effected by means of a time selection signal. Measurements were carried out on deuterium at pressures of several torr. The figure shows the course with respect to time of the electric field voltage within the plasma during a superhigh frequency impulse, namely the power diagram P(t) and the intensity diagram I(t) within 2.5 μsec (abscissa); the ordinates are the half-width δ of the Stark lines and the electric field amplitude E[kv/cm]. There are 1 figure and 3 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: February 13, 1959

Card 2/2

21(7), 24(5)

AUTHORS: Mitsuk, V. Ye., Koz'minykh, M. D. SOV/56-36-5-67/76

TITLE: The Electric Field in the Microwave Plasma as a Time Function (Elektricheskoye pole v mikrovolnovoy plazme kak funktsiya vremeni)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 5, pp 1603-1604 (USSR)

ABSTRACT: In the present "Letter to the Editor" the authors give a report on experimental investigations of the course with respect to time of the electric field voltage during the adjustment of a steady state in a pulsed superhigh frequency discharge (9400 megacycles). The amplitudes of the field were measured optically by using the Stark effect on the Balmer lines in the variable external field. The microwave plasma was obtained in a thin capillary (2 mm diameter), which was in a waveguide section of 23.10 mm^2. The transversal emission which is invariant with respect to the electric field voltage vector was investigated by means of the diffraction grating DFS-2 (theoretical resolving power 80,000) as as spectral apparatus. Recording and analysis of the spectra was carried out by means of a

Card 1/2

Measurement of an Electric Field in Plasma of Ultrahigh Frequency

formula (1) by Epstein-Schwarzschild is given for line splitting. The line splitting in a static and alternating field is discussed and exemplified in the diagrams of figure 1. The theoretical structure of the alternating field is shown in the diagram of figure 2, and it is indicated that the voltage amplitude of the electric field may be determined by measuring the half width. The methods of measurement are discussed in part II. The results obtained by means of an arrangement, which has already been discussed in a previous paper (Ref 3) where the half width was found by photography, are compared to results determined by means of a photoelectronic multiplier. The diagram of figure 3 shows the comparison. In part III of the present paper the measurement of the electric field is described, and the above methods of measurement and the block scheme of the experimental arrangement are discussed. The measurement of the half width is explained by figure 5. The experimentally determined function of the electric field of high-frequency discharge in deuterium is shown in the diagram of figure 6. There are 6 figures and 3 Soviet references.

24(3) SOV/48-23-8-21/25

AUTHORS: Mitsuk, V. Ye., Koz'minykh, M. D., Talalayeva, I. V.

TITLE: Measurement of an Electric Field in Plasma of Ultrahigh Frequency

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 8, pp 1031-1035 (USSR)

ABSTRACT: In the introduction it is pointed out that the linear Stark effect cannot be investigated in the space of the positive column of a plasma since then fields within the range of 10^3 v/cm would be necessary for a noticeable effect. In the plasma of microwaves, however, such electric fields occur, and the amplitude of the electric field is reported to be 10^4 v/cm for a frequency of 10^{10} cycles. Conditions are described for a Holzmark effect so small that the contours of the Balmer lines represent the Stark effect. It is further shown that measurement of the electric field in microwave plasma is possible by the quantum mechanic theory of the Stark effect introduced by D. I. Blokhintsev. In part I of this article the Stark contour in the alternating field is investigated, and

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The Formation of the Plasma Structure in the Development of a Discharge

20-119-3-18/65

SUBMITTED: November 16, 1957

AVAILABLE: Library of Congress

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development of the discharge the regular layers, which are fixed in space, occur earlier on the cathode side of the positive column and the layer-like state by the time expands to the anode side (and this with a velocity, which reaches some thousand meters per second). The here obtained results do not disagree with the theory by J. J. Thomson and G. P. Thomson (ref. 4). Starting with a pulse duration of 7 - 8 microseconds beneath the stable layers at the cathode side of the positive column also vibrating layers exist in the whole remaining domain. There are no indications for the fact that the occuring of such layers immediately is connected with the conditions, which prevail near the cathode.
There are 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: November 23, 1957, by M. A. Leontovich, Member, Academy of Sciences, USSR

stages. The order of the phenomena observed at a pressure of 3,8 torr, is illustrated in a figure. On occasion of a pulse duration of about 4,5 microseconds a stable blurred layer can be found on the cathode side of the positive column. In case of further increase of τ after each other new layers occur in equal distances from each other. The distance between the corresponding points of the neighbouring layers d_s is 2,7 mm. The total number of the layers increases proportionally with the time, which has passed since the establishment of the first layer. The number n of the layers in this instance increases from $n = 1$ at $\tau = 4,5$ microseconds to $n = 6$ at $\tau = 10$ microseconds. The formation of every newly forming layer in the average takes something more than 1 microsecond. All this in the essence is also valid for pressures of 4,5 and 2,8 torr. The observed phenomena can most simply be explained as follows: The formation of the spatially stable layers starts after the cathodic range approximates the stable state. At low temperatures the development of the glow, is conditioned by the strong increase of electron avalanches in the gas. The experiment, performed here, can be explained as follows: With progressing

AUTHORS: Zaytsev, A. A., Mitsuk, V. Ye. 20-119-3-18/65

TITLE: The Formation of the Plasma Structure in the Development of a Discharge (Formirovaniye struktury plazmy pri razvitii razryada)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 3, pp. 469-470 (USSR)

ABSTRACT: The authors investigated the formation of spatially stable layers in pulse-like discharge at the pressures of 4,5; 3,8; and 2,8 torr in hydrogen. The discharge container consisted of a cylindrical glass tube of 3 cm in diameter; it contained 2 plane electrodes with 9 cm distance. The discharge tube was supplied by a pulse generator producing pulses with a duration of 1 microsecond. The pulses had a sufficiently good rectangular shape. The rise time of the pulse was 0,1 microseconds and the duration of the pulses varied between 1 and 10 microseconds. The repetition frequency was 100 pulses per second. The pulse-like discharges always had an amplitude of 1 ampere. By variation of the duration τ of the voltage pulse, applied across the tube, the process of the formation of the positive column could be stopped in various

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is parallel to the voltage vector E_o are of the order 10^3 V/cm and change linearly according to the amplitude of the electric field in the waveguide. A decrease of the voltage of the electric field as a result of the dying-down of the waves in the plasm was not found to occur at the hydrogen pressure mentioned. Therefore this method can also be applied for the purpose of measuring the amplitude of the electric field in waveguide systems in such cases in which other methods cannot be employed. The author thanks Professor N. A. Kaptsov and Candidate of Physical and Mathematical Sciences M. Z. Khokhlov for their valuable advice. There are 7 figures and 16 references, 8 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, kafedra elektroniki (Moscow State University, Chair of Electronics)

SUBMITTED: July 9, 1957

1. Electric fields—Measurement 2. Electric discharges—Theory

Card 3/3

The Application of the Stark Effect in the Variable Field for the Measurements of Electric Fields in the Discharge at a Super-high Frequency 57-28-6-27/34

$$\frac{P_{sr.}}{F} = \frac{E_o^2 h^2 Y_o}{2} .$$

On the strength of the experiments carried out the following conclusions may be drawn: 1) The discharge experiments in a Geissler tube, which was put into a waveguide, showed satisfactory agreement with the theory developed by Blokhintsev. The theoretically computed half-width of the envelopes is confirmed by the experiment, but nevertheless complete checking of the theory by the determination of further solutions is possible. 2) It was found that the dependence of the half-width of the line contour δ on the amount of the amplitude on the electric field E_o is of nearly linear character. 3) It was proved by experiment that the Stark effect in the alternating field can be used for the purpose of measuring the electric field in the gas-discharge hydrogen plasm on centimeter waves. 4) The experimentally measured electric fields in hydrogen at a pressure of 5 mm mercury column in a narrow capillary which

Card 2/3

57-28-6-27/34

AUTHOR: Mitsuk, V. Ye.

TITLE: The Application of the Stark Effect in the Variable Field for the Measurement of Electric Fields in the Discharge at a Superhigh Frequency (Primeneniye effekta Shtarka v peremennom pole dlya izmereniya elektricheskikh poley v razryade na svch)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6, pp. 1316 - 1325 (USSR)

ABSTRACT: In the present paper the possibility of applying the Stark effect for measuring electric fields in the plasm is investigated. Experimental conditions were arranged in such a manner that the effect manifested itself with particular clearness and under the best possible conditions. In the discharge of the capillary homogeneity appears to have been conserved, which is indicated by the low degree of reflection and absorption of energy in the discharge, as well as by the agreement of measuring results obtained by the method of the Stark effect with the results obtained by means of the formula (7)

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Influence of the Radio-active Irradiation on the Formation of Ultra-high-frequency Pulse Discharges

this is shown in Fig.3. It is seen that the value of W_{pr} is independent of the nature of the ionising source. There are 3 figures and 5 references, 4 of which are Soviet and 1 English.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennyy universiteta im. M.V. Lomonosova (Physics Department of Moscow State University im. M.V. Lomonosov)

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1. Irradation effects-Theory

Influence of the Radio-active Irradiation on the Formation of Ultra-high-frequency Pulse Discharges

showing the above relationship for a pressure of 45.3 mmHg for the γ-source is plotted in Fig.1. Fig. 2 shows the value of τ_3 as a function of 1/A (where A is the intensity of the radiating source) for various values of the pulse power fed to the discharge space; W_0 in Fig. 2 denotes the value of the breakdown power. From Fig.2, it is concluded that τ_3 is linearly dependent on 1/A and that τ_3 decreases with increasing power fed to the breakdown region. On the other hand, it was found that for a very wide range of variation of the activity of the γ-rays, the breakdown power was practically constant. Similar results were observed if Po^{210} was used as the ionising source in spite of the fact that an α-particle produces about 500 times more electrons than a γ-ray from Co^{60}. It was also observed that in the presence of Po^{210}, the delays were also governed by the same statistical law. A curve of the breakdown power W_{pr} as a function of pressure was determined for both the ionising sources and

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AUTHORS: Khokhlov, M.Z., Bulkin, P.S., Mitsuk, V.Ye. and Taskayeva, T.F.

TITLE: Influence of the Radio-active Irradiation on the Formation of Ultra high-frequency Pulse Discharges (Vliyaniye radioaktivnogo oblucheniya na vozniknoveniye impul'snogo sverkhvysokochastotnogo razryada)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol III, Nr 5, pp 704 - 709 (USSR)

ABSTRACT: The measurements reported were carried out by means of the equipment described in the present issue of the journal, pp 689 - 703. The measurements were made at a wavelength of 3.2 cm and the ionising source was either Co^{60} emitting γ-rays or Po^{210} producing α-particles. It was found that the statistical time lags obeyed the formula:

$$N = N_0 e^{-\frac{t}{\bar{t}}} \qquad (4)$$

where N is the number of the tests in which the delay is greater than t, N_0 is the overall number of tests and $\bar{t}$ is the average statistical delay time; the experimental curve

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Electrical Discharge in Air at the Wavelength of 3.2 cm

this result, it was possible to plot the values of the breakdown fields as a function of the pressure in the horn; the resulting curve is given in Fig.7; from this, it is seen that the lowest field is required at a pressure of about 5 mmHg. The results obtained agree with those reported by Posin (Ref.1), except that the intensity of the ionising source appeared to have no significant effect on the value of the breakdown field.

The authors express their gratitude to Professor N.A. Kaptsov for directing this work.

There are 7 figures, 6 references, 3 of which are Soviet and 3 English.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova (Physics Department of Moscow State University imeni M.V. Lomonosov)

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1. Electric fields-Measurement-Methods 2. Magnetrons-Applications 3. Waveguides-Applications

Electrical Discharge in Air at the Wavelength of 3.2 cm

gas particles in the horn; the quanta of the γ-rays from the source had energies up to 1.2 MeV. The energy and the directivity of the γ-rays could be controlled by means of a special gun made of lead and fitted with a number of lead filters. The humidity of the air under the vacuum jar could be controlled by means of a special vessel filled with water whose temperature was kept constant by means of a thermostat. First, the statistical time lags of the discharge were measured and the results are shown in Fig.3; curves I, II and III were taken for three different intensities of the ionising source. Fig.4 shows the statistical time lags as a function of the applied electrical field for the maximum intensity of the ionising source; Curve I was taken at a pressure of $p = 32.4$ mmHg and curve II at $p = 45.5$ mmHg. Since the field intensities at the input of the horn (in the area of its neck) could not be measured directly, it was of interest to determine the relationship between the power transmitted through the waveguide and the field at the input of the horn. The problem is analysed in some detail and it is shown that for the investigated horn (see Fig.5) it could be assmed that the field in the horn was approximately equal to that in the waveguide. By using

109-3-5-12/17

AUTHORS: Mitsuk, V.Ye., Solntsev, G.S., Khokhlov, M.Z., Bulkin, P.S. and Zastenker, G.N.

TITLE: Electrical Discharge in Air at the Wavelength of 3.2 cm (Elektricheskiy razryad v vozdukhe na dline volny 3.2 cm)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol III, Nr 5, pp 698 - 703 (USSR)

ABSTRACT: The paper describes a method of measurement of the breakdown electric fields and the time lags in the electrical discharges in air and gives some experimental results. The block schematic of the experimental equipment is shown in Fig.1. This employed a pulsed magnetron operating at a wavelength of λ = 3.19 cm and having a repetition frequency of 300 c/s; the pulses were rectangular and had a duration of 2 μsec. The output of the magnetron was applied to a waveguide system which permitted the variation of the transmitted power and made it possible to measure the standing wave ratio and to observe the form of the pulse. The discharge was formed at the "neck" of a horn, which was situated under an evacuated glass jar. The seal between the input of the horn and the output of the waveguide was in the form of a polyethylene plate. An external radio-active source containing Co^{60}, having an activity of 10 millicurie was used as the ioniser for the

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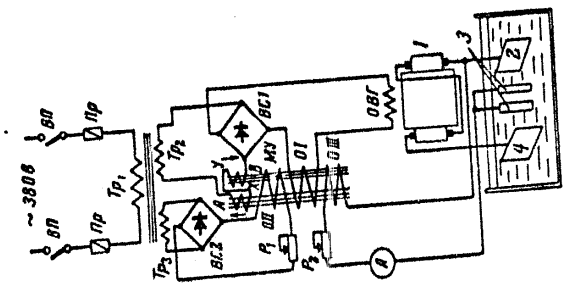
Automatic Control of Current Density on Plating Baths Using Magnetic Amplifiers

Fig. 2



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